USSR

UDC 517.5

GRINSHPAN, A. Z.

"Coefficients of Single-Sheet Functions Taking No Value Pairs
W and -W"

Moscow, Matematicheskiye Zametki, Vol 11, No 1, Jan 72, pp 3-14

Abstract: A study is made of the behavior of the class of D
functions: i.e., the class of functions of the form

$$\varphi(z) = 1 + \sum_{k=1}^{\infty} b_k z^k,$$

which are regular in $K = \{z: |z| < 1\}$, such that for any points z_1
and z_2 in K the sum $\varphi(z_1) + \varphi(z_2) \neq 0$. Also considered are the
subclass D* of single-sheet functions of the class D, and R*, the
class of functions of the form

$$f(z) = \sum_{k=1}^{\infty} a_k z^k,$$

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· USSR

which are regular and single-sheeted in K and are such that, for any points z_1 and z_2 in K, the product $f(z_1)f(z_2) \neq 1$. Finally, the class S of the functions

$$f(z) = z + \sum_{k=2}^{\infty} c_k z^k,$$

regular and single-sheeted in K, is examined. The author also investigates the asymptotic behavior of the coefficients of the functions of class D*. He is associated with the Leningrad State University.

2/2

UDC 616.921.5-084

USSR

PRIYMYAGI, L. S., Candidate of Biological Sciences; GRINSHPUN, L. Ye., Lt Col Med Serv

"Experience in Using Interferon-Stimulating Vaccines to Prevent Influenza During Epidemics"

Moscow, Voyenno-Meditsinskiy Zhurnal, No 7, 1971, p 80

Abstract: Inoculation of homogeneous groups of people 19 to 23 years of age with attenuated virus vaccines (measles, strain USSR-58; poliomyelitis types I and II, Sabin strains; live entero- virus ZhEV-4, M. K. Voroshilova strain) decreased the incidence of influenza almost five-fold compared with controls (not vaccina- ted) in the 1967, 1969, and 1970 epidemics. Interferon titers decreased with the third injection of a particular vaccine, but they remained at a high level for 4 to 5 weeks if a different vaccine was used after the second injection of the first vaccine. Since the decreased incidence of the disease among the vaccinated was consistent with the results of studies on the circulation of interferon in the blood of these individuals, it was concluded

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- 50 -

USSR

PRIYMYAGI, L. S., et al, Voyenno-Meditsinskiy Zhurnal, No 7, 1971, p 80

that the protective effect produced by vaccines of differing antigenic structure from that of influenza was due to the stimulation of endogenous interferon.

USSR

UDC 616.61-002.151

GRINSHPUN, O. Ya., Col Med Serv, Candidate of Medical Sciences;
VAS'KOV, V. G., Lt Col Med Serv; MAKSIMOV, Ye. V., Lt Col Med
Serv; ANDRONOV, A. S., Capt Med Serv; MARAKUSHEV, M. I.;
KHOMENKO, L. M.; TSEY, A. L.

"Some Clinical Data on Hemorrhagic Nephrosonephritis"

Abstract: Observation of 17 cases of hemorrhagic nephrosone-
phritis (HNN) sporadically occurring in the Transcarpathian
Region revealed a typical progress of this disease through
three stages. In the first stage, lasting 2-4 days, body tem-
perature rapidly rose to 38-40°C, the patients complained about
headache, pain in muscles and joints, and general weakness:
they were photophobic, had cutaneous hyperemia in the face and
upper trunk, and some developed dry noises in their lungs. An
incorrect diagnosis was made in all cases, partly because this
disease is very rare in Transcarpathia. In the second stage,
lasting 4-8 days, clinical signs characteristic of HNN developed

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USSR

GRINSHPUN, O. Ya., et al, Voyenno-Meditsinskiy Zhurnal, No 8,
Sep 71, pp 50-51

in all patients, and the proper diagnosis was established in all.
Only four patients had hemorrhagic conjuctiva or nosebleed. All
suffered from gastrointestinal disorders and from oliguria (down
to 200 ml per day) with hematuria and proteinuria. The third
stage -- convalescence -- began on the 9th - 11th day with the
onset of diuresis, which soon reached 6-8 liters per day.
Hemorrhages, vomiting, fever, and other discomfort subsided,
and the patients regained appetite and thirst. In the initial
days of polyuria, concentration of gamma globulins in the protein
fraction increased to 27.9%, while plasma potassium decreased
to 9.3 mg% and plasma calcium to 6.8 mg%. The patients lost 5-8
kg body weight. The stage of convalescence lasted 2-3 weeks.
The treatment was symptomatic, and all patients recovered without
complications.

2/2

1/2   018   UNCLASSIFIED   PROCESSING DATE--23OCT70
TITLE--INVESTIGATION OF THE RENAL BLOOD CIRCULATION IN CLINICAL PRACTICE
-U-
AUTHOR-(04)-GINZBURG, V.S., GRINSHPUN, S.M., DIMANT, I.N.,
   MURATKHODZHAYEV, N.K.
COUNTRY OF INFO--USSR

SOURCE--TERAPEVTICHESKIY ARKHIV, 1970, VOL 42, NR 5, PP 26-28

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--RENAL BLOOD CIRCULATION, GOLD ISOTOPE, LIVER, CIRRHOSIS,
   DIAGNOSTIC MEDICINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3001/0698   STEP NO--UR/0504/70/042/005/0026/0028
CIRC ACCESSION NO--AP0126410
                    UNCLASSIFIED

CIRC ACCESSION NO--AP0126410

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TO COMPARE AND FIND OUT THE
  DIAGNOSTIC POSSIBILITIES OF THE METHODS OF RHEOHEPATOGRAPHY AND
  INVESTIGATION OF RENAL BLOODFLOW BY MEANS OF AU PRIME198 THE AUTHOR
  EXAMINED 52 PATIENTS WITH LIVER CIRRHOSIS AND 14 WITHOUT PATHOLOGY OF
  HEPATOLIENAL SYSTEM. THE DATA OBTAINED SHOWED THAT THE SHAPE OF
  RHEOHEPATOGRAPHIC CURVE CHANGED AND THE FRACTIONAL RENAL BLOODFLOW
  GREATLY REDUCED IN PATIENTS WITH LIVER CIRRHOSIS. THE BEST RESULTS WERE
  OBTAINED WHEN COMPARING BOTH METHODS.   FACILITY: N-I INSTITUT
  RENTGENOLOGII, RADIOLOGII I ONKOLOGII MINISTERSTVA ADRAVOOKHRANENIYA
  UZBEKSKOY SSR, TASHKENT.

UNCLASSIFIED

USSR

GRINSHTEYN, E. Sh., NESTERENKO, Yu. F., FROLOVA, I. S.

"Making Multilayered Printed-Circuit Boards With Protruding Leads"

V sb. Obmen opytom v radioprom-sti (Experience Pooling in the Radio In-dustry--collection of works), vyp. 4, Moscow, 1972, pp 36-38 (from RZh--Radiotekhnika, No 8, Aug 72, Abstract No 8V328)

Translation: A technological process is worked out for making multilayered printed-circuit boards with protruding leads. The technique gives boards with high operational reliability and enables 100% tracing with automated design of multilayered printed-circuit boards without human interference. Resumé.

1/1

UNCLASSIFIED

PROCESSING DATE--20NOV70

TITLE--KINETICS OF THE DECOMPOSITION OF SOLID SOLUTION OF ARSENIC IN
GERMANIUM -U-

AUTHOR-(05)-ARSENTYEVA, I.P., GRINSHTEYN, P.M., LIDER, V.V., MURAVLEV,
YU.B., RCZHANSKIY, V.N.

CCUNTRY CF INFG--USSR

SCURCE--FIZ. TVERD. TELA 1970, 12(4), 1260-1

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TCPIC TAGS--CHEMICAL KINETICS, SOLID SCLUTION, ARSENIC ALLUY, GERMANIUM
ALLOY, SINGLE SRYSTAL, HALL CONSTANT

CCNTRCL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/0373

STEP NO--UR/0181/70/012/004/1260/1261

CIRC ACCESSICN NO--AP0120128

UNCLASSIFIED

CIRC ACCESSICN NU--AP0126128
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SINGLE CRYSTALS OF GE WERE
    INVESTIGATED WHICH CCNTAINED 3.6 TIMES 10 PRIME19 ATOMS AS-CM PRIME3.
    THE CCNCN. OF CURRENT CARRIERS WAS CALCD. FROM THE HALL COEFF. MEASURED
    BY THE COMPENSATION METHOD AT CONST. CURRENT. A KINETIC CURVE IS GIVEN
    OF THE DECCMPN. OF THE SOLID SOLN. CF AS IN GE AT 550DEGREES. IT WAS
    OBTAINED FROM THE DATA ON THE CONCN. OF CURRENT CARRIERS AS A FUNCTION
    OF THE TIME OF ANNEALING.   THE CURVE CONSISTS OF 3 LINEAR SECTIONS. IN
    THE 1ST SECTICN NUCLEI ARE FORMED AND THEIR NO. INCREASES WITH TIME,
    SECTICN 2 REPRESENTS A DIFFUSION LIMITING PROCESS OF GROWTH OF PLATELIKE
    SEPNS., AND IN SECTICN 3 THE PROCESS OF SEPN. IS SLOWED DOWN BECAUSE OF
    COALESCENCE CF THE PARTICLES.   FACILITY: GOS. NAUCH. ISSLED.
    PROEKT. INST. REDKOMETAL. PROM., MOSCOW, USSR.

UNCLASSIFIED

Acc. Nr. **AP0049835** Abstracting Service: Ref. Code
— CHEMICAL ABST. 5/70   uR0409

105423f Infrared absorption spectra of some C-halo deriva-
tives of 1,2,4-triazole. Grinstein, V.; Strazdina, A.; Grin-
valde, A. (Inst. Org. Sin., Riga, USSR). Khim. Geterotsikl.
Soedin. 1970, (2), 248-58 (Russ). Absorption spectra were re-
ported and provisional band assignments were made for 12 1,2,4-
triazoles and their Ag and K salts, in which substituents were
selected from H, Cl, Br, and the spectra were taken for the solid
state of the substances.
                                        G. M. Kosolapoff ·

REEL/FRAME
19801760

1/2   013   UNCLASSIFIED   PROCESSING DATE--11SEP70
TITLE--SYNTHESIS AND STUDY OF THIOUREAS. VI. 3,AMINOMETHYL,
   4,4',DIALKOXYTHIOCARBANILIDES -U-
AUTHOR--SAUSINS, A., GRINSTEYNS, V.

COUNTRY OF INFO--USSR

SOURCE--LATV. PSR ZINAT. AKAD. VESTIS. KIM. SER. 1970, (1), 85-9

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHEMICAL SYNTHESIS, CATALYTIC HYDROGENATION, THIOUREA,
   AROMATIC NITRO COMPOUND, BENZENE DERIVATIVE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1987/1064   STEP NO--UR/0464/70/000/001/0085/0089

CIRC ACCESSION NO--AP0104462
                        UNCLASSIFIED

2/2   013
CIRC ACCESSION NO--AP0104462   UNCLASSIFIED   PROCESSING DATE--11SEP70
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. MICROFICHE OF ABSTRACT CONTAINS
GRAPHIC INFORMATION. I.HCL IN ETOH WERE HYDROGENATED AT ROOM TEMP. AND
1 ATM. OVER ADAMS CATALYST, AND THE PRODUCT SOLNS. TREATED WITH 1.2 EQ.
R PRIME3 C SUB6 H SUB4 NCS TO GIVE THE FOLLOWING II.HCL (R, R PRIME1, R
PRIME2 (OR NR PRIME1 R PRIME2), R PRIME3, M.P., AND PERCENT YIELD
GIVEN): ME, MORPHOLINO, H (III), 176-9DEGREES, 64; ME, PIPERIDINO, H,
197-9DEGREES, 72; ME, PIPERIDINO, OET (IV), 164-5DEGREES, 56; ME, ET,
ET, H, 165-7DEGREES, 61; ME, ET, ET, OET, 169-71DEGREES, 77; ME, ET, ET,
BUO, 155-8DEGREES, 70; ME, ET, ET, N-C SUB5 H SUB11 O, 130-2DEGREES,
83; ME, ET, ET, N-C SUB6 H SUB13, 137-9DEGREES, 86; ET, ET, ET, OET,
149-53DEGREES, 72; ET, ET, ET, BUO, 160-3DEGREES, 76; ET, PIPERIDINO,
N-C SUB5 H SUB11 O, 172-4DEGREES, 75. III AND IV GAVE FREE AMINES, M.
164-5DEGREES AND 144-5DEGREES, RESP.

UNCLASSIFIED

UDC 632.95

USSR

TEVELEV, G. Kh., GRINSHTEYN, Ye. I., KOFMAN, L. P.

"A Method of Obtaining β,β'-bis-(0 0-dialkyldithiophosphoryl)-diethylene Disulfides"

USSR Author's Certificate No 364623, class C 07 f 9/16, C 07c 149/12, filed 23 Oct 70, published 1 Mar 73 (from RZh-Khimiya, No 18 (II), Sep 73, Abstract No 18 N448 P by O. Ye. Yachmennikova)

Translation: β,β'-bis-(0,0-dialkyldithiophosphoryl)-diethylene disulfides are obtained by the reaction of 0,0-dialkyl S-β-mercaptoethyl dithiophosphate with a halogen in a solvent. For example, 2.9 g of I_2 is added in small amounts to a mixture of 5 g of 0,0-dimethyl S-β-mercaptoethyl dithiophosphate, 20 ml of C_6H_6, and 10 ml of water at a temperature of about 20° and intensively stirred until the reaction mass becomes slightly colored. The organic layer is washed with water (2 X 10 ml) and 4 g of β,β'-bis-(0,0-dimethyldithio-phosphoryl)-diethylene disulfide, n^{20}_D 1.5985, d_4^{20} 1.3690 is isolated. β,β'-bis-(0,0-diethyldithiophosphoryl)-diethylene disulfide, n^{20}_D 1.5680, d_4^{20} 1.2570 is obtained in a similar manner. Other examples are given in which Cl_2 and Br_2 are used instead of I_2 for oxidation.

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USSR   UDC 547.26'118+547.279.1

TEVELEV, G. Kh., GRINSHTEYN, Ye. I., KOFMAN, L. P., SOKAL'SKIY, M. A.,
AGUREYEV, V. G., and SINITSYNA, N. T.

"Addition of S-β-Mercaptoethyl 0,0'-Dialkyl Dithiophosphates to Substituted
Olefins"

Abstract: It is shown that S-β-mercaptoethyl 0,0'-dialkyl dithiophosphates
add to esters of maleic, acrylic and methacrylic acids as well as to substi-
tuted amides of acrylic acid in the presence of catalysts -- salts of tran-
sition metals -- with formation of the corresponding substituted S-β-alkyl-
mercaptoethyl 0,0'-dialkyl dithiophosphates. Analysis shows that the
addition reaction takes place contrary to Markovnikov's rule, with the
formation of products which are unbranched in the S-β-alkyl radical.

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USSR

UDC 632.95

TEVELEV, G. KH., GRINSHTEYN, YE. I., KOFMAN, L. P.

"Method of Preparing Substituted S-Betaalkylmercaptoethyl-O,O-Dialkyldithiophosphates"

USSR Author's Certificate No 250136, filed 18 Jul 68, published 15 Jan 70 (from RZh-Khimiya, No 18, 25 Sep 70, Abstract No 15N624, by I. M. Mil'shteyn)

Translation: Compounds with the general formula $(RO)_2P(S)SCH_2CH_2S-[CH(P^I)]_n R^{II}$ (I) (R and R^I = H, alkyl, R^{II} = COOAlk, COOH, $CONH_2$, CONHAlk, and $C(O)N(Alk)_2$), exhibiting insecticidal activity, are prepared by the reaction of O,O-dialkyl-S-beta-mercaptoethyldithiophosphates with halogenides of carboxylic acids. To a mixture of 0.12 mole $ClCH_2COOMe$ and 0.092 mole S-beta-mercaptoethyl-O,O-dimethyldithiophosphate in 30 ml C_6H_6 is added 0.1 mole Et_3N in 15 ml C_6H_6 at 2-5°, mixed for 3 hrs at about 20°, allowed to stand for 12 hrs, and after usual treatment, I is obtained (R = Me, R^I = H, n = 1, R^{II} = COOMe) (yield 77%, b. p. 135-140/0.016, $n^{20}D$ 1.5309,

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USSR

TEVELEV, G. KH., et al, USSR Author's Certificate No 250136, filed
18 Jul 68, published 15 Jan 70 (from RZh-Khimiya, No 18, 25 Sep 70,
Abstract No 15N624, by I. M. Mil'shteyn)

d_4^{20} 1.2294), I modifications are similarly obtained (R = Et, R^I =
H, n = 1, R^{II} = CONHMe), yield 70%, $n^{20}D$ 1.5440, and d_4^{20} 1.2277.

2/2

USSR

UDC 539.213

BREKHOVSKIKH, S. M., VIKTOROVA, Yu. N., GRINSHTEYN, Yu. L., and LANDA, L. M.

"Bases of Radiation Behavior of Glass and Ceramics"

Stroyizdat (Construction Publications) 1971, 256 pages, illustrated, price 1 ruble 52 kopeks (from RZh--Fizika, No 9, 1971, Abstract No 9E231K)

Translation: This is a monograph on the effect of radiation on glass and ceramics, designed for engineers and technicians. Principal attention is given to the dependence of the degree of radiation destruction on the structure, chemical, and phase state of the material. T. Kh.

1/1

1/2   011   UNCLASSIFIED   PROCESSING DATE--02OCT70
TITLE--DIAMOND POTENTIAL OF THE EASTERN PART OF THE RUSSIAN PLATFORM -U-

AUTHOR-(03)-GRINSON, A.S., KUKUSHKIN, A.I., MIKHAYLOVSKAYA, L.N.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. GEOL. 1970, (1), 105-13

DATE PUBLISHED-------70

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--ROCK, DIAMOND, GEOCHEMISTRY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1983/1273   STEP NO--UR/0011/70/000/001/0105/0113

CIRC ACCESSION NO--AP0106059
                              UNCLASSIFIED

CIRC ACCESSION NO--AP0106059

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PRIMARY DIAMOND BEARING
KIMBERLITELIKE ROCKS IN VOLCANIC EVENTS OF EXPLOSION PIPE TYPES, DIKES,
ETC. IN THE EASTERN PART OF THE RUSSIAN PLATFORM, WERE FORMED ONLY.
DURING THE PLATFORM STAGE OF THE STRUCTURE DEVELOPMENT BY STARTING FROM
MIDDLE OR UPPER PROTEROZOIC (RIPHEAN) TIME WHEN THE RIGID CRYST.
BASEMENT, CAPABLE OF FRACTURING, WAS ALREADY FORMED. THE DETECTION OF
BURIED (HIDDEN) MAGMATIC BODIES OF BASIC AND ULTRABASIC COMPN. IS
POSSIBLE BY GEOPHYS. METHODS. THE MAGNETIC ANOMALIES, LOCALIZED TO THE
ZONES OF DEEP FRACTURES IN THE PLATFORM BASEMENT, ARE THE MOST PROMISING
IN THIS PROSPECT. THE MINERALS, TYPICAL OF BASIC AND ULTRABASIC ROCKS,
AND MINERALS, GENETICALLY RELATED TO THE DIAMONDS (PYROPE, CHROME
SPINEL, ETC.), WERE FOUND DURING MINERALOGICAL STUDY OF HEAVY FRACTIONS
FROM ROCKS OPENED BY DRILL HOLES AND SITUATED IN THE ZONES OF DEEP
FRACTURES OF THE BASEMENT., SEVERAL MAGMATIC BODIES OF ALK. BASIC COMPN.
WERE FOUND IN THE DIAMOND BEARING KOLVA VISHERA AREA ON THE WESTERN
SLOPES OF THE URALS. THIS INDICATES THE POSSIBILITY OF FINDING THERE
PRIMARY DIAMOND BEARING ROCKS.

USSR   UDC 62.5;007:621,391:519.2

GRINTSYK, V.V. and MIKHAYLOVSKIY, V.N. (L'vov)

"Evaluation of the Quality of Reproduction of Information Transmitted by
Grouped Codes"

Kiev, Otbor i Peredacha Informatsii. Respublikanskiy Mezhvedomstvennyy Sbornik
(Collection and Transmission of Information. Republic Interdepartmental
Collection), Vypusk 25, "Naukova Dumka," 1970, pp 9-18

Abstract: The authors examine the problem of evaluating the quality of repro-
duction of information transmitted by grouped codes over a stationary, symmetric
channel without a memory. Using the results obtained in one of their previous
works, they find the entropy for grouped n·k codes, where n is the length of the
code and k is the quantity of informational symbols. Once the entropy expres-
sions have been obtained, it is possible to find the average quantity of informa-
tion received per code word and to evaluate the informational effectiveness of
the coding and the quality of the reproduction of information. The latter is
expressed as the ratio of lost information to transmitted information. General
expressions for transmitted and lost information, which depend on the length of
the code words, are obtained for two well-known error-correcting codes -- the
Bose-Chaudhuri and Reid-Muller [Rid-Myuller] codes.

1/1   - 54 -

Acc. Nr. AP0049835   Abstracting Service: Ref. Code
                      CHEMICAL ABST. 5/70   UR0409

105423f Infrared absorption spectra of some C-halo deriva-
tives of 1,2,4-triazole. Grinsteins, V.; Strazdina, A.; Grin-
valde, A. (Inst. Org. Sin., Riga, USSR). Khim. Geterotsikl.
Soedin. 1970, (2), 248–58 (Russ). Absorption spectra were re-
ported and provisional band assignments were made for 12 1,2,4-
triazoles and their Ag and K salts, in which substituents were
selected from H, Cl, Br, and the spectra were taken for the solid
state of the substances.
                                    G. M. Kosolapoff   -

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REEL/FRAME
19801760

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TITLE--UNSATURATED ACYLINDANDIONES. V. CONDENSATION OF 2,ACETYL,
   1,3,INDANDIONES WITH NITROBENZALDEHYDES -U-

AUTHOR--GEYTA, L., GRINVALDE, A., ARENS, A.

COUNTRY OF INFO--USSR

SOURCE--LATV. PSR ZINAT. AKAD. VESTIS, KIM. SER. 1970, (1), 99-102

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CONDENSATION REACTION, BENZENE DERIVATIVE, AROMATIC KETONE,
   AROMATIC NITRO COMPOUND, PIPERIDINE, BENZALDEHYDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1987/1062   STEP NO--UR/0454/70/000/001/0099/0102

CIRC ACCESSION NO--AP0104460
                         UNCLASSIFIED

CIRC ACCESSION NO--AP0104460
ABSTRACT/EXTRACT--(U) GP-0-   ABSTRACT.   MICROFICHE OF ABSTRACT CONTAINS
  GRAPHIC INFORMATION.   2,ACETYL,1, 3,INDANDIONE WAS CONDENSED WITH O-,
  M-, AND P-NITROBENZALDEHYDE IN PIPERIDINE TO GIVE O, M-, AND
  P-NITROCINNAMOYLPERINAPHTHO,1,3,INDANDIONE (I), M. 200-2DEGREES,
  211-12DEGREES, AND 276DEGREES (ACOH), RESP. BESIDES I, 13.3PERCENT II
  M. 193-4DEGREES (ACOH) WAS ISOLATED.

TITLE--TURBULENCE ENERGY BALANCE IN A NATURE RIVER BED STREAM -U-

AUTHOR--GRINVALD, D.I., SHNAYDMAN, V.A.

COUNTRY OF INFO--USSR

SOURCE--METEOROLOGIYA I GIDROLOGIYA, 1970, NR 2, PP 71-75

DATE PUBLISHED-------70

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--RIVER WATER, TURBULENT FLOW, STREAM, KINETIC ENERGY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1987/0871   STEP NO--UR/0050/70/000/002/0071/0075

CIRC ACCESSION NO--AP0104307
                         UNCLASSIFIED

CIRC ACCESSION NO--AP0104307

ABSTRACT/EXTRACT--(U) GP-0-   ABSTRACT.   RESULTS OF DATA PROCESSING OF
  INSTANTANEOUS STREAM VELOCITIES ARE GIVEN IN THE ARTICLE. IT IS SHOWN
  THAT IN THE BOTTOM LAYER A VERTICAL PROFILE OF THE AVERAGED LONGITUDINAL
  VELOCITY COMPONENT IS WELL DESCRIBED BY THE LOGARITHMIC LAW. THE VALUES
  OF DYNAMIC VELOCITY AS WELL AS TURBULENT KINETIC ENERGY PRODUCTION ARE
  DETERMINED. DISSIPATION VELOCITY OF TURBULENT ENERGY IS DEFINED FROM
  VALUES OF SPECTRAL DENSITY AND STRUCTURAL FUNCTIONS IN THE INERTIA
  INTERVAL. KINETIC ENERGY OF TURBULENCE AND THE COEFFICIENT OF TURBULENT
  VISCOSITY ARE EXPRESSED BY MEANS OF DISSIPATION AND A VERTICAL
  COORDINATE. THE BALANCE OF KINETIC ENERGY OF TURBULENCE IN THE BOTTOM
  LAYER IS GIVEN. THE RELATIONSHIP BETWEEN DIMENSIONLESS VALUES OF
  DISSIPATION VELOCITY AND THE VERTICAL COORDINATE IS OBTAINED.

UNCLASSIFIED

1/2   020   UNCLASSIFIED   PROCESSING DATE--13NOV70
TITLE--PROPERTIES OF COMBINED POLYAMIDE AND PHENOL FORMALDEHYDE RESINS. 2.
   WATER RESISTANCE OF BONDS FORMED BY MELTS OF COMBINED RESINS -U-
AUTHOR-(04)-MARCHENKO, L.N., GRINYUK, M.A., SOROKINA, N.S., KOTOV, M.P.

COUNTRY OF INFO--USSR

SOURCE--IZV. VYSSH. UCHEB. ZAVED., TEKHNOL. LEGK. PROM. 1970, (1), 64-8

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--POLYAMIDE RESIN, PHENOL FORMALDEHYDE RESIN, WATERPROOFING,
   ADHESIVE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3006/1107   STEP NO--UR/0323/70/000/001/0064/0068

CIRC ACCESSION NO--AT0134793
                          UNCLASSIFIED

CIRC ACCESSION NO--AT0134793
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. RESISTANCE TO WATER OF THE TITLE
  ADHESIVES OBTAINED BY THE COMBINATION (AT 200DEGREES IN N) OF POLYAMIDE
  AND PHENOL HCHO RESINS VARIES NONMONOTONICALLY WITH THE RATIO OF THE
  RESINS, PASSING THROUGH A MAX. AND A MIN. THE COMPNS. CONTG.
  8-15PERCENT PHENOL HCHO RESIN ARE THE MOST STABLE AND RESISTANT TO
  WATER. THE OPTIMUM BONDING TEMPS. ARE TABULATED. THE PROBABLE
  MECHANISM OF IMPROVING STABILITY OF ADHESIVES IS DISCUSSED.
  FACILITY: KIEV. TEKHNOL. INST. LEGK. PROM., KIEV, USSR.

UNCLASSIFIED

1/2   010   UNCLASSIFIED   PROCESSING DATE--30OCT70
TITLE--VAPOR PRESSURE OVER ANTIMONY SESQUISULFIDE ANTIMONY SESQUIOXIDE
   MIXTURES -U-
AUTHOR-(03)-GRINZAYD, YE.L., NADEZHINA, L.S., BESPALENKOVA, E.K.

COUNTRY OF INFO--USSR

SOURCE--ZH. NEORG. KHIM. 1970, 15(2), 317-18

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ANTIMONY COMPOUND, SULFIDE, OXIDE, VAPOR PRESSURE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1996/1954   STEP NO--UR/0078/70/015/002/0317/0318

CIRC ACCESSION NO--AP0118916
                         UNCLASSIFIED

CIRC ACCESSION NO--AP0118916
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE RATE OF EVAPN. IN A SB SUB2 O
SUB3-SB SUB2 S SUB3 SYSTEM WAS DETD. GRAVIMETRICALLY AND A DIAGRAM OF
TOTAL AND PARTIAL EVAPN. OF THE SYSTEM IS PRESENTED GRAPHICALLY. SB
SUB2 S SUB3 HAS AN ABNORMAL CURVE OF PARTIAL VAPOR PRESSURE FOR A WIDE
RANGE OF CONCN. THE PARTIAL VAPOR PRESSURE OF SB SUB2 O SUB3 SHOWS A
POS. DEVIATION FROM RAOULT'S LAW. THE DATA IMPLY FORMATION OF AN
UNIDENTIFIED OXYSULFIDE IN THE VAPOR PHASE.   FACILITY:
LENINGRAD. POLITEKH. INST., LENINGRAD, USSR.

UNCLASSIFIED

1/2   028   UNCLASSIFIED   PROCESSING DATE--27NOV70
TITLE--FRACTIONATION DURING THE SUBLIMATION OF MIXTURES OF AN ANTIMONY
   SESQUISULFIDE ANTIMONY SESQUIOXIDE SYSTEM -U-
AUTHOR-(03)-NADEZHINA, L.S., GRINZAYD, YE.L., BESPALENKOVA, YE.K.

COUNTRY OF INFO--USSR

SOURCE--ZH. PRIKL. KHIM. (LENINGRAD) 1970, 43(4), 874-6

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--SUBLIMATION, ANTIMONY COMPOUND, METAL OXIDE, SULFIDE, SURFACE
   FILM, CHEMICAL DEPOSITION, METAL VAPOR DEPOSITION, COMPLEX COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3001/0427   STEP NO--UR/0030/70/043/004/0874/0876

CIRC ACCESSION NO--AP0126180
                         UNCLASSIFIED

CIRC ACCESSION NO--AP0126180
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE COMPN. AND STRUCTURE OF THIN
  VACUUM DEPOSITED SB SUB2 S SUB3 FILMS WERE STUDIED.   THE VOLATILIZATION
  OF SB SUB2 S SUB3 FROM THE SOLID SB SUB2 S SUB3 SB SUB2 O SUB3 MIXT.
  OCCURS AS PARTICLES OF COMPLEX COMPN. PARTIAL VAPORIZATION RATE VS.
  COMPN. DIAGRAMS WERE USED TO EST. THE DEGREE OF SB SUB2 O SUB3
  ENRICHMENT OF THE SUBLIMATE. THE SUBLIMATE IS ENRICHED IN O FOR ALL
  COMPNS. OF THIS SYSTEM.   FACILITY: LENINGRAD. POLITEKH. INST.
  IM. KALININA, LENINGRAD, USSR.

UNCLASSIFIED

Acc. Nr: *AP0037244*

Ref: Code: UR 0301

KORDIAMIN EFFECT ON NAD-GLUCOHYDROLASE IN RABBIT HEART MUSCLE

Griorovich, Yu. A.

Institute of Pharmacology USSR Academy of Medical Sciences, Moscow

It was shown that kordiamin inhibits the activity of NAD-glucohydrolase by 24 and 60% both in homogenates and in partially purified enzyme preparations. The inhibitory action is increased at preincubation of enzyme with kordiamin and the inhibition was noncompetitive. The inhibitory effect of kordiamin was reversible. Noncoincidence between optimal pH-values for NAD-glucohydrolase and those for inhibitory action of kordiamin was noted.

D. n.

REEL/FRAME
19730171

USSR

FEL'DMAN, J., GRIS, D.

"Systems for Construction of Translators"

Algoritmy i Algoritmich. Yazyki [Algorithms and Algorithmic Languages --
Collection of Works], No 5, Moscow Acad. Sci. USSR Computer Center, 1971,
pp 105-214, (Translated from Referativnyy Zhurnal, Kibernetika, No 3, 1972,
Abstract No 3 V525, unsigned).

Translation: A critical review is presented of contemporary works on auto-
mation of the construction of translators for programming languages. The
second chapter studies formal investigations of syntax and its applications
to the construction of translators. Various approaches to automation of
post syntactic (cemantic) aspects of the construction of translators are
studied in the third chapter and certain related problems -- in the fourth
chapter.

GAISHEAKO, V.A.

EXTRACELLULAR RIBONUCLEASE OF PENICILLIUM BREVICOMPACTUM.
S.I.Bezborodova, T.V.Ilyina, V.I.Krupianko, V.K.Grischenko.   G7 :
Institute of Biochemistry and Physiology of Microorganisms,
USSR Academy of Sciences, Puschino, USSR.

The ability of Penicillium fungi to release extracellular RNases
with optimum pH in mild acidic medium has been established.
The extracellular RNase of Penicillium brevicompactum has been purif-
ed to homogenous state. Optimum pH, specificity, mode of action on native
substrates, stability, thermostability, influence of SH-reagents and urea
have been examined as well as inhibition by products of reaction and by
their analogues.
pH-dependence of kinetic parameters of transferase and hydrolase
steps of reaction has been determined using low molecular weight substra-
tes (C>p, U>p, ApAp and C;A).
The amino acid composition of the enzyme has been studied and the
effect of carboxymethylation, photooxidation and chemical reduction on the
enzyme activity has been investigated.
On the basis of data obtained one may draw a conclusion that Pen.
brevicompactum RNase is similar to RNase T. of Aspergillus oryzae and to
RNase N1 of pen. ... and. Histidine residue and carboxylic group appear to
be in the active site of the enzyme.

So: OOE 324/14036-72, 19 Jun 72; 4th International Fermentation Conference
     Kyoto, Japan - 19-26 March 1972 (Abstracts of Soviet Papers)

Devices

USSR

GRISHA, G. V.

UDC 621.385.7.002.72

"Protection of Cathode from Effect of Free Air in Demountable Electron Devices"

Translation: A method is described for protection of an oxide cathode from the effect of free air during dismounting of demountable electron devices, and the scheme of a device using this method is presented. The essence of the method of protection consists of the fact that the space surrounding the cathode is separated from the remaining part of the device (shut off by a vacuum valve) and is filled with an inert gas, heavier than air (e.g., argon) at a pressure equal to atmospheric. At the same time the cathode must be located at the bottom of the device. Because in this case the inleakage of free air to the cathode takes place as the result of diffusion (and not because of equal pressures), then the cathode is preserved longer than when it is maintained in a vacuum. In addition, rigid requirements are not imposed on the sealing devices. An experimental check of the method gave positive results. 1 ill. G. B.

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USSR

UDC 681.39.621.317.3

GRISHAKOV, G. I., CHUNAYEV, V. S., Moscow

"Principles of Constructing a Stroboscopic Digital System for Automating Investigations of Electric Circuits Operating with Signals in the Nanosecond Range"

Novosibirsk, Avtometriya, No 2, 1972, pp 3-9

Abstract: The principles of constructing an automated measuring system investigated in this article are based on the application of a digital computer to realize compensation digital stroboscopic conversion of the instantaneous values of the investigated signal. In a signal of this type the digital computer participates directly in the control of the stroboscopic device with respect to two feedback channels, and it can simultaneously perform primary processing of the results by defined algorithms which permits still another increase in accuracy and measurement rate. A block diagram of the system is presented, and its operating characteristics are described. An example of an experimental study performed by means of the stroboscopic digital signal meter is presented. The meter was used to measure the voltages of a test pulse and the mean deviations for various numbers of measurements. The results of these measurements are plotted. A functional schematic of the arithmetic module of the digital computer unit of the meter which executes the investigated measurement algorithms and performs the primary data processing without digital correction of the scanning nonlinearity is presented.
1/1

USSR   UDC: 519.2

GRISHAKOV, V. I.

"Random Periodic Modes of a Quasilinear System with One Degree of Freedom with
a Nonlinearity Consisting of a Random Process with Independent Increment of the
Normal Distribution"

Tr. Seminara Kafedr Teor. Mekh. i Vyssh. Mat. Dzhambul. Tekhnol. In-t Legk. i
Pishch. Prom-sti [Works of Seminar of Departments of Theoretical Mechanics and
Higher Mathematics, Dzhambul Institute of Technology of Light Industry and
Food Industry], 1972, No 2, pp 254-258 (Translated from Referativnyy Zhurnal
Kibernetika, No 11, 1972, Abstract No 11V73, from the Resume)

Translation: A quasilinear system of the form

$$\frac{d^2x}{dt^2} + k^2x = \mu\xi(x,\,\omega) + f(t),\tag{1}$$

is studied, where k=const, f(t) is a periodic function of t with period 2π,
$\xi(x,\,\omega)$ is a random process with independent, normally distributed increments,
μ is a small parameter. Problems of the distance of a random periodic solution

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USSR

Grishakov, V. I., Tr. Seminara Kafedr Teor. Mekh. i Vyssh. Mat. Dzhambul.
Tekhnol. In-t Legk. i Pishch. Prom-sti, 1972, No 2, pp 254-258 (Translated
from Referativnyy Zhurnal Kibernetika, No 11, 1972, Abstract No 11V73, from
the Resume)

of equation (1) with probability 1 are studied and methods are indicated for
determination of some of its probability characteristics. Nonresonant (k is
not an integer) and resonant (k is an integer) cases are differentiated.

2/2

USSR

GRISHAKOV, V. I.

"Random Conditions of Quasilinear Stochastic Differential Systems which are Periodic on the Average"

Translation: A study was made of the following system

$$dx/dt = A(\eta(t))x + \mu X(t, x, \mu(t), \mu) + f(t),\qquad (1)$$

where $x \in R^n$, $\eta(t)$ is a homogeneous Markov chain with an even number of states, $f(t)$ and $X(t, x, \eta, \mu)$ continuous and periodic with respect to the t vector-functions. It is assumed that the trivial solution of the corresponding linear homogeneous system is exponentially stable on the average.

Conditions are obtained under which system (1) has a solution which is on the average bounded for sufficiently small μ. It is demonstrated that under these conditions, from ergodicity of the process $\eta(t)$ the only periodic solution on the average of system (1) must exist. In determining the probability

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USSR

GRISHAKOV, V. I., Tr. Seminara kafedr teor mekh. i vyssh. mat. Dzhambul, tekh-
nol. in-t legk. i pishch. prom-sti, 1972, vyp. 2, pp 3-7

characteristics of the limiting periodic condition $M[x(t)]$ and $M\{x(t + \tau)x^*(t)\}$
it is proposed that the small parameter method be applied to the corresponding
equations.

2/2

Pesticides

USSR   UDC: 632.95

GRISHAKOVA, O. M.

"Experience With the Combined Use of Chlorophos and Benzimidazole Derivatives on Sugar Beet Plots"

Zap. Leningr. S.-kh. in-ta (Notes of Leningrad Agricultural Institute), 1972, 180, pp 28-32 (from RZh-Khimiya, No 15, Aug 72, Abstract No 15N442)

Translation: Combining chlorophos (I) with 1-cyanoethyl-5 (6)-nitrobenzimidazole minimizes the damage to beet leaves by beet webworms and increases assimilation of the plant surface as compared with use of I or II alone. Combining I and II has a positive effect on the growth of root crops, dry content in the crop, sugars and nitrogen compounds.

1/1

Converters

USSR   UDC: 621.376.56

GRISHANKCV, B. T., PODPAL'KO, L. F., SHTEYERMAN, L. M.

"Peculiarities in the Use of Exponential Converters in the Microsecond
Range"

Tr. VNII Zh.-d. transp. (Works of the All-Union Scientific Research Insti-
tute of Railway Transportation), 1970, vyp. 412, pp 13-18 (from RZh-Radio-
tekhnika, No 12, Dec 70, Abstract No 12D367)

Translation: The authors discuss the singularities of using pulse bridge
elements in circuits which operate in the range from a few microseconds to
tens of microseconds. The delay of bridge pulse elements is considered
from the standpoint of the time duration precision required. Three illustra-
tions, three tables, bibliography of four titles. Resumé.

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USSR   UDC 621.557.12,035.2

CHUPRINA, V. I., FINKEL'SHTEYN, S. D., RYABUKHIN, A. G., GRISHAYENKOV, B. G.,
GAVRILOV, B. A.

"Mechanism of the Protective Effect of Lithium during Anode Oxidation of Porous
Nickel"

Tr. Kurgan. mashinostroit. in-ta (Works of the Kurgan Machine Building Insti-
tute), 1971, vyp. 17, pp 80-84 (from RZh-Khimiya, No 6 (II), Jun 72, Abstract
No 6L259)

Translation: A study was made of the mechanism of the protective effect of
Li during anode oxidation of cast porous Ni-electrodes under the conditions of
electrolysis of water. It is demonstrated that effective inhibition of the
process of anode oxidation of the Ni arises from the formation of a thin film
containing solid solutions of LiO_2, NiO on the Pb electrodes.

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USSR   UDC 621.357.12.035.2

KOROVIN, N. V., GRISHAYENKOV, B. G., PANICH, R. U., GAVRILOV, B. A., RYABUKHIN, A. G.

"Some Problems of the Theory and Results of Studies of the Operation of Porous Electrodes in Devices for the Electrolysis of Aqueous Solutions of Bases"

Tr. Kurgan. mashinostroit. in-ta (Works of the Kurgan Machine Building Institute), 1971, vyp. 17, pp 42-49 (from RZh-Khimiya, No 6 (II), Jun 72, Abstract No 6L257)

Translation: A study was made of some of the operating characteristics of liquid-gas porous electrodes manufactured by the cermet procedure from carbonyl Ni powder (particle size 3-6 μ) and used in devices for electrolysis of aqueous solutions of bases. A method is proposed for determining the gas content of the operating porous electrodes by the flow rate of the electrolyte. The gas content is defined as a function of the structure of the electrode and the polarizing current density. It was demonstrated that biporous electrodes with a porosity of 70-75% with a large pore diameter of $\approx$60-80 μ and fine pores of 6-8 μ are optimal. By comparing the functions for the activity of the electrode and its gas content as a function of the porosity, the effect of the gas content and the porosity on the magnitude of the effective electrical conductivity of the electrolyte in the pores of the electrode was determined. The possibility of predicting the activity of the Ni electrode is demonstrated.
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Electrochemistry

USSR   UDC 621.357.12.035.2

RYABUKHIN, A. G., YERSHOV, A. I., GRISHAYENKOV, B. G., GAVRILOV, B. A.

"Optimal Current Density for Decomposition of Water in an Electrolytic Cell with Porous Nickel Electrodes"

Translation: A study was made of the effect of the temperature on the magnitude of the dimensional D_a for electrolysis of water in a cell with porous electrodes. It was established that there is a region of optimal size D_a which expands with an increase in temperature and is limited on the one hand by the conversion of the anode from the passive state to the active state accompanied by strong corrosion and, on the other hand, by a sharp increase in the nonproductive losses.

1/1

Nuclear Physics

ALEYSHVILI, D. I., GRISHAYEV, I. Ya., MOCHESHNIKOV, N. I., and
TOLSTOY, A. Ye.

"Reduction of Idle Time in the Operation of a Linear Accelerator"

Abstract: In this paper. it is shown that, by using an accumulator
with no essential structural changes, the pulsed electron beam of a
linear   electron accelerator containing an accumulator trans-
forms to a flow of gamma quanta with an intensity and duration
that may vary within broad limits. The experimentation which led
to this conclusion was conducted with the accumulator of the
Physicotechnical Institute of the Ukrainian Academy of Sciences,
using the first five sections of a linear accelerator with an
energy of 300 Mev acting as injector. In the accelerator the
electron energy was 70 Mev, the pulse current was 50 ma with a du-
ration of 1.2 μs, and the injection frequency 1-50 Hz. The accele-
rator beam was formed by the rotatory focusing system of the accu-
mulator, introduced into the ring. and then captured by the pulse
field of the inflector before its accumulation in the magnetic
1/2

USSR   UDC: 621.384.64:539.122   -

ALEYSHVILI, D. I., et al, Atomnaya energiya, vol. 33, No 1, July
1972, pp 593-594

circuit with the high-frequency system operating. A description
of the target is given. The radiation obtained from the target's
braking the electron stream was picked up by recording equipment.
A diagram of the apparatus is given,along with curves of the life-
time of the accumulated electron beam as a function of the target
position and for the intensity of the braked radiation as a func-
tion of time. It is found that by increasing the number of accu-
mulated particles to 10^{11}, the photon output can be raised to 10^9-
10^{10} per cycle.

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USSR

GRISHAYEV, I. A., YEFIMOV, V. P., KASILOV V. I., KOVALENKO, G. D., MORO-
KHOVSKIY, V. L., FISUN, A. N., SHRAMENKO, B. I., Physicotechnical Insti-
tute, Academy of Sciences of the Ukrainian SSR, Khar'kov

"Concerning Some Particulars of the Interaction of High-Energy Electrons
and Positrons With Crystals"

Abstract: The total yield of electron and positron bremsstrahlung is
studied as a function of crystal orientation when the primary beam is
nearly parallel to the crystal axis. The electron and positron beams
were characterized by the following data: the energy at the maximum
of the spectra was (1000 ± 5) MeV; the width of the energy spectra in
both instances was $\sim 4\%$; there was no more than 8% difference between
the average currents of the electron and positron beams; the difference
in angular divergences of the beams was no more than $5 \cdot 10^{-5}$ radian; the
number of charged background particles did not exceed 0.05% of the number
of electrons and positrons respectively. The experiment was done on the

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accelerator at the Physicotechnical Institute of the Academy of Sciences
of the UkrSSR. The background due to positron converter photons was 30%
of the measured total photon yield and varied by 0.5% during the experi-
ment. Silicon crystals 0.64 mm thick cut in plane (110) and niobium
crystals 1 mm thick cut in plane (100) served as the specimens. The
strongest distinguishing parameter on the curves plotted for bremsstrahlung
yields as related to crystal orientation was the width of the minimum in
the small-angle region,which was less for positrons than for electrons
in both instances. Controlled experiments seem to indicate that this
effect can be attributed to the sign of the charge. The authors thank
V. M. Kobezskiy, V. I. Myakota,and V. I. Popenko for maintaining stable
accelerator operation; V. I. Artemov for assisting with measurement of
beam parameters; and Ye. A. Levikov for assisting with preparation of
the crystals. One figure, bibliography of five titles.

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YEGIYAN, K. SH., BOCHEK, G. L., KULIBABA, V. I., and GRISHAYEV, I. A., Yerevan Physics Institute and Engineering Physics Institute of Academy of Sciences Ukrainian SSR

"Angular and Energy Distribution of Proton in (γp) and (ep) Reactions at C^{12} Nuclei for Excitation Energies up to 130 Mev"

Abstract: Measurements of cross sections (γp) and (ep) of reactions at C^{12} nuclei for excitation energies up to 130 MeV are reported. The study was performed on the 300-Mev linear electron accelerator of the Engineering Physics Institute of the Academy of Sciences Ukrainian SSR. A beam of electrons in the linear accelerator, turned once, was focused on a 0.083 radial units-thick target located in the scattering chamber connected by vacuum with the accelerator. The angle between beam direction and normal to the target surface was 45°. The electron beam intensity was measured by a secondary emission monitor at two gold foils with total thickness of 20 microns. Secondary protons were identified by the "impulse-flight" method. The total yield of protons was measured in the following reactions: γ + C^{12} ——>
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YEGIYAN, K. SH., et al., Izvestiya Akademii Nauk Armyanskoy SSR, Fizika,
Vol 6, No 3, 1971, pp 161-167

p + B, and e + $C^{12} \rightarrow$ e' + p +B. Results were compared with the quasi-
deuteron and one-particle models of photon absorption in nuclei. The best
agreement of theoretical and experimental energy spectra was achieved at
B = 60 MeV (V is the value of the potential at the bottom of the potential
well). In the comparison made with the one-particle model of photon
absorption, agreement between experimental and calculated values for both
energy and angular spectra could not be obtained. However, the findings
showed that in the region of excitation energy below the meson production
threshold, data on the reactions (γ p) and (ep) at complex nuclei do not
contradict either the quasideuteron or the one-particle model of photon
absorption.

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USSR   UDC 621.372.8

KRAMSKOY, G. D., ZYKOV, A. I., GRISHAYEV, I. A., and KOLOT, Z. M.

"Dispersion Properties of a Circular Diaphragm Waveguide With Radial Cuts of the Diaphragms ($\pi/2$ Type Oscillations)"

Abstract: The effect of the length of radial cross-shaped and right-angle (two cuts at an angle of 90°) cuts in a diaphragm with a slit width of 0.4 mm on the dispersion characteristics of E_{01}, EH_{11}, EH_{12}, EH_{21}, and E_{02} waves was investigated. The purpose of the study was to select versions and types of radial cuts which would shorten as much as possible the number of repetitions of segments with the same geometry in different sections of a multi-section accelerator; i.e., to spread the frequencies of hybrid waves which can be excited by the beam in these sections. Measurements show that the reason for the effective rise in the critical current of the accelerating sections when radial cuts of the diaphragms are applied is the considerable lowering of the Q of the system for high defocusing EH waves as compared with a waveguide without cuts. The data on Q and the frequencies of the synchronous interaction of the beam with higher types of oscillations are
1/2

USSR

KRAMSKOY, G. D., et al, Zhurnal Tekhnicheskoy Fiziki, Vol 51, No 3, Mar
71, pp 567-571

used to determine approximately the critical current of a waveguide with a
given geometry.

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USSR

UDC 621.385.623.4:621.3.019.3

GRISHAYEV, I.A., SOKOLOV, V.D., MARTYNOV, A.I.

"Simple Method Of Forecasting Breakdowns Of Power Amplifier Klystrons"

Elektron. tekhnika. Nauchno-tekhn. sb. Elektron. SVCh (Electronic Technology. Scientific-Technical Collection. Microwave Electronics), 1970, Issue 12, pp 126-130 (from RZh--Elektronika i yeye primeneniye, No 4, April 1971, Abstract No 4A164)

Translation: On the basis of an analysis of data from the exploitation of a group of devices, a simple and operative method is proposed for individual prediction of breakdowns of power amplifier klystrons, utilizing little more than data of plant tests reflected in the descriptive documents of devices. The method was checked on 60 devices disabled because of emission loss, and in 75 percent of the cases gave an accurate forecast. 3 ref. Summary.

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YEGIYAN, K. SH., BOCHEK, G. L., GRISHAYEV, I. A., ALANAKYAN, K.
V., KULIBABA, V. I., and SITENKO, M. L., Yerevan Physics Insti-
tute, Physicotechnical Institute of the Academy of Sciences
Ukrainian SSR

"Apparatus for the Study of Direct Nuclear Reactions Caused by
Electrons and Gamma Quanta With an Energy of Up to 300 Mev"

Abstract: The article gives a description of an apparatus de-
signed for studying nuclear structure and the character of the
interactions of electrons and gamma quanta with a maximum energy
of up to 300 Mev. A focused beam of the 300-Mev Khar'kov linear
accelerator goes from a parallel transfer system over a vacuum
electronic conductor into a scattering chamber. Revolving around
the latter on a fixed platform are two magnetic analyzers designed
    to record secondary reaction particles produced by the gamma
quanta or electrons. Situated on an extension of the electronic

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USSR

conductor after the scattering chamber is a secondary emission
monitor for the relative measurement of the electron beam inten-
sity. After the secondary emission monitor the electron beam is
absorbed by a burial ground of heavy concrete blocks. The appa-
ratus was tested by measuring the elastic-scattering cross-sec-
tion for electrons on a free proton in a CH_2 target. A feature
of the apparatus is th..t it works under a high background level
from the electron beam. The calibration measurements performed
indicate that the apparatus permits the study of direct nuclear
reactions with a cross-section of $\geq 2 \cdot 10^{-3}$ sq cm/steradian.

The authors thank A. I. ALIKHANYAN, Corresponding Member
of the Academy of Sciences USSR, and Professor V. M. KHARITONOV,
Sector Chief of Yerevan Physics Institute, for their interest in
the work and repeated discussions; N. I. MOCHESHNIKOV, Sector
Chief of the Physicotechnical Institute, for his assistance in

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USSR

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USSR   UDC 537.311.33:546.28/.289

VAYKHBROT, E.I., GRIZHKO, V.M., GRISHAYEV, I.A., NOSOV, V.M.

"Transients In Germanium And Silicon During Irradiation By The Momentum Of
Electrons Of Linear Accelerator With 35 Mev Energy"

V sb. Radiatsion. fiz. nemets. kristallov (Radiation Physics Of Nonmetal
Crystals--Collection Of Works), Minsk, Nauka i tekhn., 1970, pp 57-66 (from
RZh--Elektronika i yeye primeneniye, No 1, January 1971, Abstract No 1B24)

Translation: The paper investigates transients in Ge and Si, originating under
the influence of the momentum of electrons with 35 Mev energy. The specimens
were prepared from plates of Ge and Si and during the investigation were placed
in a uniform field of electrons. The thickness of the specimens was selected so
that generation of charge carriers might take place uniformly with respect to
all the space. It is shown that dependence of the amplitude of additional con-
duction on the flux density is nonlinear. During analysis of transients it is
necessary to take into account the time change of the mobility because of the
additional mechanism for scattering by the ionized atoms of the semiconductor
and the decrease of the life time of the nonequilibrium charge carriers. 7 ill.
8 ref. Summary.

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UNCLASSIFIED   PROCESSING DATE--09OCT70

TITLE--RADIAL MOTION OF ELECTRONS AND FOCUSING THE BEAM IN A 300 MEV
LINEAR ACCELERATOR WITH ALLOWANCE FOR THE INFLUENCE OF ELECTRIC FIELD

AUTHOR-(03)-GRISHAYEV, I.A., DEMYANENKO, G.K., RUBTSOV, K.S.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL TEKHNICHESKOI FIZIKI, VOL. 40, JAN. 1970, P. 149-154

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--ELECTRON BEAM, ELECTRON MOTION, LINEAR ACCELERATOR, PARTICLE
TRAJECTORY, FOCUSING ACCELERATOR

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1978/1507   STEP NO--UR/0057/70/040/000/0149/0154

CIRC ACCESSION NO--AP0046346
                    UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--09OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EXAMINATION OF THE RADIAL MOTION
OF ELECTRONS IN A LINEAR ACCELERATOR, WITH AN ALLOWANCE FOR PERTURBING
FORCES DUE TO THE ELECTRIC FIELD ASYMMETRY IN THE MATCHING ACCELERATING
SECTIONS. IT IS SHOWN THAT THE MAGNITUDE OF THIS FORCE DEPENDS ON THE
AMPLITUDE AND PHASE OF THE ACCELERATING WAVE. THE PARTICLE TRAJECTORY
IS CALCULATED AND OPTIMUM PARAMETERS FOR FOCUSING THE ELEMENTS ARE
ESTABLISHED.

UNCLASSIFIED

USSR

GRISHAYEV, I. A.; et al (Physicotechnical Institute of the Ukrainian Academy of Sciences, Khar'kov)

"Charged Pion Photoproduction in Ca^{40} Nucleus at Maximum Bremsstrahlung Energy of 340 Mev"

Kiev, Ukrainskiy Fizicheskiy Zhurnal; March, 1973; pp 445-50

ABSTRACT: The authors measured the differential cross sections of charged pion photoproduction with kinetic energies of 20 to 90 Mev in the Ca^{40} nucleus at angles of 60, 90, and 120°. The maximum bremsstrahlung energy E_o was 340 Mev, and positive and negative pions were detected by means of a Ya-2-type photoemulsion. The ratio of the yield of π^- mesons to π^+ mesons decreases with an increase in kinetic energy of the pions. The experimental results are in agreement with the mechanism of volume production. With kinetic energies of the pions of more than 60 Mev the experimental results do not contradict the cascade model.

A simple relationship is obtained for calculating the ratio π^-/π^+, taking into account the difference of the thresholds of production of π^- and

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USSR

GRISHAYEV, I. A., et al., Ukrainskiy Fizicheskiy Zhurnal, March 1973,
pp 445-50

γ^+ mesons and the ratio of the cross sections of the charged pion to free
nucleon formation. This expression agrees well with the experimental results.

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USSR

GRISHCHAK, V. Z., MANEVICH, A. I.

"Influence of Rib Rigidity for Bending From a Plane on Stability of a Reinforced Cylindrical Shell"

Gidroyaeromekh. i Teoriya Uprugosti. Mezhvuz. Nauch. Sb. [Hydromechanics, Aeromechanics and the Theory of Elasticity. Interdepartmental Scientific Collection], 1972, No 14, pp 121-130, (Translated from Referativnyy Zhurnal, Mekhanika, No 10, 1972, Abstract No 10 V316, by the author's).

Translation: Based on the equations of the semi-momentless theory of shells, a general method is presented for solution of the problem of stability of a reinforced shell considering the rigidity of ribs when they are bent out of plane. In the calculation plan, the ribs are looked upon as discretely placed elements, stringers are considered by introducing adjusted rigidities. The primary quantitative dependences and estimates are produced using the examples of a freely supported shell with one rib and a shell with an elastic rib at its edge. It is shown that the ordinary assumption of zero rigidity of ribs for bending out of plane generally results in slight error, but with certain specific boundary conditions may result in qualitatively different results. 9 Biblio. Refs.
1/1

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USSR   UDC   621.3.049.75

NEFEDOV, V. S., YAKUNIN, V. A., BOLOTOV, G. V., KIREYEV, I. V., UDOV, V. S.,
GRISHCHENKO, G. V., VAYSBURG, A. O.

"A Method of Making Multilayered Printed-Circuit Boards"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki,
No 2, Jan 71, Author's Certificate No 290492, division H, filed 18 Dec 67,
published 22 Dec 70, pp 169-170

Translation: This Author's Certificate introduces a method of making multi-
layered printed-circuit boards which is based on stacking the boards
followed by interconnection of the current-conducting sections. As a
distinguishing feature of the patent, the manufacturing technique is sim-
plified and the resolving capacity of the boards is improved by connecting
the outer current-conducting layers to the inner layers, and interconnecting
the inner layers, the interlayer connections of the boards being made by
current-conducting pins.

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USSR

UDC 911.3.613.11

SKOROBOGATOVA, A. M., PARAMONOV, Yu. A., LUKACHEV, V. V., ZABORSAKIN, V. A.,
SHILOV, Yu. M., GRISHCHENKO, K. F.

"The Significance of Some Factors in Polar Regions for the Formation of Adaptation Processes"

V sb. Akklimatiz. i krayev. patol. cheloveka na Severe (Acclimatization and Regional Pathology of Man in the Far North--collection of works), Arkhangel'sk, 1970, pp 66-68 (from RZh-36. Meditsinskaya Geografiya, No 1, Jan 71, Abstract No. 1.36.43 by V. Zhadovskaya)

Translation: This work includes data gathered in the Antarctic, Central Arctic Basin, and experimental research in a cooling chamber. The parameters studied were: arterial pressure, pulse rate, plethysmogram, rheogram, and skin temperature in 112 polar residents. The most marked shifts occurred in new arrivals or in those who returned after an absence of 5-6 years; as well as in those polar residents with high arterial pressure. In conditions where volume charge is increased and relationship of atmospheric elements is altered, there is a decrease of skin sensitivity to low temperature. A disturbance of the balance between sympathetic and parasympathetic regulation of cardiovascular activity is also observed.
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USSR

GRISHCHENKO, L. I., Candidate of Biological Sciences, All Union Institute of Experimental Veterinary Medicine

"Pathomorphological Changes in Fish After Pesticide Poisoning"

Abstract: The toxicity of methylnitrophos (M), phosphamide (P), and trichloro-metaphos-3 (T) for carp was studied under laboratory conditions. The studied compounds are of medium toxicity; their lethal doses (LD_{50} after 48 hrs) were: M, 15 mg/l, P, 40.3 mg/l, T, 220 mg/l. Subacute poisoning was produced by 5 mg/l M and 13.3-44 mg/l T, whereas chronic poisoning was produced by 0.62-3 mg/l M and 8-10 mg/l T, respectively. The symptoms of intoxication by the above substances include nerve-paralytic effects and pronounced disturbances in the central and peripheral nervous systems. Fundamental changes were detected in the thalamus and medulla oblongata. In comparing the results of clinical and pathomorphological studies of the effects of the above three toxins on fish, it was found that M and T have more pronounced resorptive action and a local toxic effect on the branchial tissue, which gives rise to profound changes in the respiratory epithelium. It must be assumed that the nerve-paralyzing and hepato-tropic effects of these substances cause their toxic effects.
1/1

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USSR

UDC: 621.385:530.145.6:528

GRIGOR'YEV, V. M., GRISHCHENKO, L. V.

"Some Problems in the Use of Semiconductor Lasers for Measuring the Altitude of the Lower Boundary of Clouds"

Translation: The authors discuss the possibility of making light-ranging instruments for measuring the altitude of the clouds on the basis of a gallium arsenide injection laser. Formulas and graphs are presented which can be used to calculate the necessary laser power as a function of the state of the atmosphere and the altitude of clouds, as well as receiver sensitivity. Basic expressions are derived and analyzed for the signal-to-noise ratio in the system. Sensitivity is calculated for two types of photomultipliers used as photoreceivers. Calculations are presented which show the possibility of using the instrument for measuring cloud altitudes up to 500-1000 m. Two illustrations, one table, bibliography of six titles. Resumé.

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USSR

GRISHCHENKO, N. M.

UDC 8.74

"Implementation of an Expanding Programming Language"

V sb. _Teoriya yazykov i metody postroyeniya sistem programmir_. (Language Theory and Methods of Constructing Programming Systems--collection of works), Kiev-Alushta, 1972, pp 130-138 (from _RZh-Kibernetika_, No 12, Dec 72, Abstract No 12V436)

Translation: A study is made of a specialized programming system T in which provision is made for the possibility of expansions of the input language oriented toward programming various classes of problems of the automated planning and design system. The translation of the programs in the system T is realized in two steps: first, the initial program is converted into the intermediate language -- M-220 Avtokod and then into machine language. The basic part of the programming system is the syntactic macroprocessor T_1 realizing the first step of the translation. The second step is realized by means of the translator T_0 from the M-220 Avtokod into machine language.

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USSR

GRISHCHENKO, N. V.

"Editing Subroutine"

Preobrazovaniye i Obrabotka Inform. [Conversion and Processing of Information --
Collection of Works], Moscow University Press, 1972, pp 18-29 (Translated from
Referativnyy Zhurnal Kibernetika, No 4, 1973, Abstract No 4V674, by V.
Mikheyev).

Translation: An editing subroutine is suggested, designed for joint opera-
tion with the TA-1M ("signal") translator, to add the capability of outputing
computation results on the ATSPU-128 printer. By calling the subroutine, the
user can work with 12 operators which edit, store and output the information
produced on the broad-format printer. As the subroutine operates, a field
is organized in the first memory cube, similar to a sheet of paper. The field
is called a page. The page measures 120 rows by 128 positions. The rows are
numbered top to bottom from 0 to 119. The positions are numbered from left
to right from 0 to 127. Seven operators are designed to produce images on the
page: 0 -- row of text (from the text file); 1 -- number with order; 2 -- num-
ber without order; 3 -- vertical line; 4 -- horizontal line; 5 -- individual

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USSR

Grishchenko, N. V., Preobrazovaniye i Obrabotka Inform., Moscow University Press, 1972, pp 18-29.

character; 6 -- row of text (ALGOL). Each image has a reference point: for the numbers with and without order, the decimal point is the reference point; for vertical and horizontal lines -- one end of the line; for an individual character -- the character itself; for a row of text -- the beginning of the row.

In order to place an image at the required point on the page, the coordinates of the reference point must be stated. Each enscription is accompanied by erasure of information previously written at the same position. Images cannot be superimposed. The length of the subroutine is 425 words. When it is used, the operating field of the system must be expanded. The subroutine occupies words 3000-7777 in the first cube and 0001-0017 of the zero cube. The subroutine is called by the usual method used in the TA-1M, by operator R0501. Each of the operators of the program is described in detail.

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1/2   016

UNCLASSIFIED

TITLE--PRODUCTS OF THE ELECTROLYTIC DECOMPOSITION OF FUSED CARBONATES -U-

PROCESSING DATE--23OCT70

AUTHOR-(04)-DELIMARSKIY, YU.K., GRISHCHENKO, V.F., TUMANOVA, N.KH., SHAPOVAL, V.I.

COUNTRY OF INFO--USSR

SOURCE--UKR. KHIM. ZN. 1970, 36(2), 136-41

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ELECTROLYSIS, CARBONATE, FUSED SALT, ALKALI METAL, EUTECTIC, CHEMICAL DECOMPOSITION, ELECTROLYTIC DECOMPOSITION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1996/1932

STEP NO--UR/0073/70/036/002/0136/0141

CIRC ACCESSION NO--AP0118894

UNCLASSIFIED

2/2   016
CIRC ACCESSION NO--AP0118894   UNCLASSIFIED   PROCESSING DATE--23OCT70
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. NO C IS FORMED AT THE CATHODE IF
AN ELECTROLYTE CONTG. 50PERCENT EQUIMOLAR K SUB_2 CO SUB_3-NA SUB_2 CO SUB_3
MIXT. IN KCL IS USED AT 700DEGREES. IF TO THE SOLN., 9 PERCENT LI SUB_2
CO SUB_3 IS ADDED THE CURRENT EFFICIENCY OF C BECOMES 92.8PERCENT AND IN
LI SUB_2 CO SUB_3-K SUB_2 CO SUB_3 EUTETIC AT A C.D. OF 1 A-CM PRIME2, THE
EFFICIENCY OF C IS 100PERCENT AT 450DEGREES, FALLING WITH TEMP. AND C.D.
INCREASE DUE TO FORMATION OF ALKALI METAL. ADDN. OF CO SUB_2 TO THE
SOLN. HAS LITTLE EFFECT ON C FORMATION. ADDN. OF 3PERCENT KOH MARKEDLY
REDUCES IT. THERE IS A DECREASE IN C EFFICIENCY WITH ADDN. OF
25-50PERCENT KF. THE FORMATION OF C IS ATTRIBUTED TO THE PRESENCE OF CO
SUB_2 IN THE ELECTROLYTE AND THE EFFECT OF LI SUB_2 CO SUB_3 ON THE EASE OF
ITS DECOMPN. NO FORMATION OF CO WAS OBSERVED. AT THE ANODE, CO SUB_2-O
SUB_2 MIXTS. ARE FORMED; THE MAX. CO SUB_2 :O SUB_2 RATIO WAS OBTAINED AT
840DEGREES IN K SUB_2 CO SUB_3-NA SU_{32} CO SUB_3 MIXT. (2.35:1.0). IN LI
SUB_2 CO SUB_3-K SUB_2 CO SUB_3 AT 600DEGREES, THE RATIO WAS 1.0:1.17. THIS
IS BELIEVED TO BE LARGELY DUE TO THE INCREASED EASE OF DISCHARGE OF CO
SUB_3 PRIME2 NEGATIVE AT THE HIGHER TEMP.   FACILITY: INST. OBSHCH.
NEORG. KHIM., KIEV, USSR.

UNCLASSIFIED

1/2   010   UNCLASSIFIED   PROCESSING DATE--04DEC70
TITLE--ACTIVITY OF MITOCHONDRIAL MONOAMINE OXIDASE AND CATECHOL AMINE
   LEVEL IN THE PLACENTA OF WOMEN IN NORMAL LABOR AND IN PRIMARY UTERINE
AUTHOR-(02)-GRISHCHENKO, V.I., DUDKO, L.V.

COUNTRY OF INFO--USSR

SOURCE--AKUSH. GINEKOL. (MOSCOW) 1970, 46(4), 65-8

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--MITOCHONDRION, OXIDASE, CATECHOLAMINE, PLACENTA, OBSTETRICS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY FICHE NO----FD70/605003/F02 STEP NO--UR/0580/70/046/004/0065/0068

CIRC ACCESSION NO--AP0139574
                          UNCLASSIFIED

2/2   010
CIRC ACCESSION NO--AP0139574   UNCLASSIFIED   PROCESSING DATE--04DEC73
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PLACENTAS FROM TWO GROUPS OF WOMEN
IN NORMAL LABOR (32) AND IN PRIMARY UTERINE INERTIA (15) WERE ANALYZED
FOR MONOAMINEOXIDASE (MAO) ACTIVITY AND CONTENT OF CATECHOL AMINES.
THERE WAS A POS. INTERRELATION BETWEEN MAO ACTIVITY AND THE DURATION OF
LABOR.   IN PRIMARY UTERINE INERTIA THERE WAS A STATISTICALLY
SIGNIFICANT RISE IN THE MAO ACTIVITY IN THE PLACENTA IN COMPARISON WITH
PHYSIOL. LABOR. THE CATECHOL AMINE CONTENT WAS LOW IN THE PLACENTAS IN
BOTH NORMAL LABOR AND IN UTERINE INERTIA. THE LEVELS WERE NOT DIFFERENT
IN THE TWO CLIN. GROUPS.   FACILITY: PEDIAT. FAK., KHAR'KOV, MED.
INST., KHARKOV, USSR.

UNCLASSIFIED

1/2   012   UNCLASSIFIED   PROCESSING DATE--16OCT70
TITLE--POSSIBLE PREDICTION OF THE AMINO ACID CONTENT IN BACTERIAL PROTEIN
   USING THE NUCLEOTIDE COMPOSITION OF DNA -U-
AUTHOR-(05)-SAMOILOV, P.M., KOKURINA, N.A., UAROVA, V.N., VOROBYEVA, L.I.,
   GRISHCHENKO, V.M.
COUNTRY OF INFO--USSR

SOURCE--PRIKL. BIOKHIM. MIKROBIOL. 1970, 6(1), 44-7

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--BACTERIA, MYCOBACTERIUM, CHEMICAL COMPOSITION, AMINO ACID,
   NUCLEOTIDE, DNA

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1996/0571   STEP NO--UR/0411/70/006/001/0044/0047

CIRC ACCESSION NO--AP0117801
                        UNCLASSIFIED

CIRC ACCESSION NO--AP0117801
ABSTRACT/EXTRACT--(U) GP-0-   ABSTRACT.   THE DEPENDENCE BETWEEN COMPN. OF
DNA AND AMINO ACID CONTENT IN BACTERIAL PROTEIN WAS USED FOR PROVING THE
POSSIBILITY OF USING PUBLISHED DATA ON DNA COMPN. FOR PREDICTING AMINO
ACIDS CONTENT OF THE BACTERIAL PROTEIN.   THE NUCLEOTIDE COMPN. OF DNA
AND AMINO ACIDS IN PROTEIN OF LACTOBACTERIUM PLANTARUM AND MYCOBACTERIUM
LUTEUM WERE STUDIED.   SUBSTANTAIL DIFFERENCES IN THE COMPN. OF PROTEINS
IN THESE BACTERIA WERE FOUND, ESP. IN THE CASE OF ASPARTIC ACID,
PROLINE, ALANINE, VALINE, METHIONINE, TYROSINE, HISTIDINE, AND ARGININE.
  THE ANALYSES SHOWED THAT THE RELATION BETWEEN THE NUCLEOTIDE COMPN. OF
DNA AND AMINO ACIDS CONTENT OF TOTAL BACTERIAL PROTEIN WAS TRUE AND
RESPECT TO 9 AMINO ACIDS OUT OF 16 STUDIED (ASPARTIC ACID, SERINE,
GLUTAMIC ACID, PROLINE, GLYCINE, METHIONINE, ISOLEUCINE, TYROSINE, AND
ARGININE).   IN THE CASE OF ASPARTIC ACID, PROLINE, AND METHIONINE THE
EXPTL. FOUND DEVIATIONS IN THE CONTENT OF AMINO ACIDS IN PROTEINS OF L.
PLANTARUM IN COMPARISON WITH PROTEINS OF M. LUTEUM WERE HIGHER THAN
THEORETICAL DEVIATIONS.   THE NUCLEOTIDE COMPNS. OF DNA IN L. PLANTARUM
AND M. LUTEUM PROVE THAT DNA OF L. PLANTARUM AND M. LUTEUM IS OF AT AND
GC TYPE, RESP.   THE CONTENT OF METHIONINE IN THE PROTEIN OF L. PLANTARUM
WAS 2.7PERCENT AND THIS WAS HIGHER THAN FOR THE PROTEIN OF M. LUTEUM.
       FACILITY: INST. BIOCHEM, PHYSIOL MICROORG., MOSCOW, USSR.

UNCLASSIFIED

UNCLASSIFIED   PROCESSING DATE--20NOV70

TITLE--SPATIALLY HOMOGENEOUS GRAVITATIONAL FIELDS -U-

AUTHOR--GRISHCHUK, L.P.

CCUNTRY CF INFO--USSR

SOURCE--AKACEMIIA NAUK SSSR, DOKLADY, VOL. 190, FEB. 11, 1970, P. 1066-1069

DATE PUBLISHED--11FEB70

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--GRAVITATION FIELD, VECTOR ANALYSIS, ALGEBRAIC EQUATION

CCNTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1992/2041   STEP NO--UR/0020/70/190/000/1066/1069

CIRC ACCESSICN NO--AT0112990
                    UNCLASSIFIED

CIRC ACCESSION NO--AT0112996
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DERIVATION OF THE EINSTEIN
EQUATIONS IN A CCMOVING REFERENCE FRAME FOR ALL TYPES OF SPATIALLY
HOMOGENEOUS METRICS. IN ORDER TO FACILITATE DIRECT PHYSICAL
INTERPRETATION OF THE QUANTITIES FIGURING IN THE EINSTEIN EQUATIONS,
THESE EQUATIONS ARE WRITTEN IN A CHRONOMETRICALLY INVARIANT FORM
PROPOSED BY ZEL'MANOV (1956). IT IS SHOWN THAT ALL THE INVESTIGATED
VECTOR AND TENSOR QUANTITIES FIGURING IN SPATIALLY HOMOGENEOUS METRICS
OBTAINED BY INTRODUCING A COMOVING REFERENCE FRAME AND INTEGRATING THE
KILLING EQUATIONS MAY BE EXPANDED IN TERMS OF VECTORS OF A REFERENCE
POINT WITH COEFFICIENTS DEPENDING ONLY ON TIME.   FACILITY:
MOSKOVSKII GOSUDARSTVENNYI UNIVERSITET, MOSCOW, USSR.

1/2   030   UNCLASSIFIED   PROCESSING DATE--09OCT70
TITLE--ANTIFRICTION PROPERTIES OF STEEL -U-

AUTHOR-(02)-GRISHCHUK, N.S., SMIRNOV, A.I.

COUNTRY OF INFO--USSR

SOURCE--LITEINOE PROIZVOD. 1970, (1), 23

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--ANTIFRICTION MATERIAL, ANTIFRICTION ALLOY, ALLOY DESIGNATION,
    MEDIUM CARBON STEEL, ANTIMONY, SULFUR, ELECTRON MICROPROBE,
    INTERMETALLIC COMPOUND, FRICTION/(U)CAMECA ELECTRON MICROPROBE, (U)ST45
    MEDIUM CARBON STEEL, (U)BROTSS555 BRONZE, (U)BOLK BRASS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1995/1377   STEP NO--UR/0128/70/000/001/0023/0023

CIRC ACCESSION NO--AP0116826
                          UNCLASSIFIED

CIRC ACCESSION NO--AP0116826
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ATTEMPT WAS MADE TO DEVELOP
   ALLOYS WHICH WOULD FORM THIN FILMS ON THE FRICTION SURFACE. FOR THIS
   PURPOSE STEEL 45 WAS COMPLEXLY ALLOYED WITH SB AND S SO THAT IN ITS
   STRUCTURE A COMPLEX SULFIDE PHASE WAS FORMED IN ADDN. TO THE USUAL
   PEARLITE AND FERRITE. A STUDY WITH THE MICROPROBE CAMECA SHOWED THAT SB
   WAS DISSOLVED ONLY IN FERRITE AND SULFIDE PHASES. WHEN THE STEEL
   CONTAINED SB 0.87 AND S 0.45PERCENT, THEN THE FERRITE GRAIN CONTAINED IN
   ITS VOL. 0.2-0.8PERCENT SB, WHILE IN INDIVIDUAL MICROVOLS. (1 M MU) THE
   SB CONCN. WAS AS HIGH AS 10-26PERCENT. THE SB CONCN. IN THE SULFIDE
   PHASE VARIED 20.0-72.0PERCENT. IT WAS ASSUMED THAT SB SUB2 S SUB3
   ENTERED THE EUTECTIODS MN-SB SUB2 S SUB3 AND FES-MNS-SB SUB2 S SUB3.
   THE LOW M.P. OF SB SUB2 S SUB3 (540DEGREES) CAUSED THE MELTING OF THE
   SULFIDE AT THE FRICTION SURFACE. MOREOVER, SB FORMED WITH FERRITE FESB
   SUB2 M. 732DEGREES, WHEREBY IT CONTRIBUTED TO THE FILM FORMATION AT THE
   FRICTION SURFACE. A COMPARISON OF WEAR RESISTANCE OF SB-S STEEL (C
   0.42, SI 0.36, MN 0.75, P 0.038, S 0.46, AND SB 0.60PERCENT) WITH BRONZE
   BR. OTSS 5-5-5 SHOWED A 3.3 TIMES HIGHER WEAR RESISTANCE FOR THE STEEL.
   ALSO INSERTS FROM SB-S STEEL WORKED 6-7 TIMES LONGER THAN INSERTS FROM
   BRASS 80LK.

USSR   UDC: 621.375.82

GRISHECHKINA, S. P., SHOTOV, A. P.

"Shift of the Emission Line of InSb Injection Lasers With An In-
crease in the Concentration of Acceptor Impurities"

Translation: Coherent emission is achieved at $T = 20^{\circ}K$ with electric injec-
tion of carriers using a p^{+}-p-n^{+} structure. According to the spectrum of
spontaneous and coherent emission a reduction in the width of the forbidden
band was observed with an increase in the concentration of acceptor im-
purities. It is shown that the laser emission frequency can be varied within
a small range (about 5%).

1/1

Acc. Nr: AP0047120⁻   Ref. Code: UR 0246

THE DIAGNOSTIC ELECTROCARDIOGRAPHIE SIGNIFICANCE OF CHANGES IN MENTAL PATIENTS DURING INSULIN THERAPY

A. Ye. Grishikov

The author analysis the obtained results of the ECG in 1251 mental patients in the pre-insulin treatment period. The changes of separate elements of the ECG in the hypoglycemic period (prior to shocks), in the hypoglycemic shock period and after multiple reiterations are being considered. These changes are not specific for insulin hypoglycemia, because similar changes may be observed in other conditions as well, such as in organic lesions of the myocardium. In establishing a differential diagnosis, special attention should be drawn to the fact that in insulin hypoglycemia all the changes are unstable and are not accompanied by changes of the blood, urine or thermoregulation

REEL/FRAME
19790613

USSR

UDC 621.181.001.5

GRISHIN, A. D., GUTSALO, G. I., SHTAL'MAN, S. G., ABRYUTIN, A. A., DRONOV,
L. A., SOLOMONOV, V. M., KROL', A. Ya. and BRITVIN, O. V., (all engineers);
and Candidate of Technical Sciences VIKHREV, Yu. V., ORGRES-VTI-Kostromskaya
GRES

"Results of a Study of the Combustion and Temperature Regime of the Lower
Radiation Section of the TGMP-114 Boiler"

Moscow, Teploenergetika, No 3, 1973, pp 43-46

Abstract: Earlier gas-mazut boilers of this general type were not completely
satisfactory on account of the low reliability of the heating surfaces (mainly
the lower radiation section) and the great heat flow in the combustion chamber.

This difficulty has been corrected in the new main-series supercritical
pressure TGMP-114 boiler by reducing the number of boilers (from 8 to 6),
securing maximal removal of the extreme burners from the side walls, and
use of recirculation of cold smoke gases into the lower part of the furnace
chamber.

The direct-flow TGMP-114 boiler has an output of 950 t/hr, with steam parameters
of 255 kg/cm² and 565/570°C.   Analysis of operational data on chemical control

USSR

GRISHIN, A. D., et al., Teploenergetika, No 3, 1973, pp 43-46

shows that in 1971 iron content of feed water was 10-15 μg/kg, 15-20 μg/kg the previous year, and 20-50 μg/kg during the start-up period in 1969, with high content of 100-150 μg/kg in individual cases. These facts point up the formation of iron oxide deposits as a basic cause of the external corrosion of the screening pipes of the lower radiation section, and emphasize the necessity of water control and chemical cleansing.

2/2

USSR   UDC: 621.396.69:621.314.2(088.8)

SHUL'ZHENKO, V. V., VANDYSHEV, M. S., GRISHIN, A. G.

"A High-Frequency Choke"

USSR Author's Certificate No 252429, filed 10 Apr 68, published 6 Feb 70
(from RZh-Radiotekhnika, No 12, Dec 70, Abstract No 12V388 P)

Translation: A high-frequency choke is proposed which consists of several
turns of coaxial cable on a toroidal ferrite core. To extend the band of
the resonance curve for the choke, this core is made up of several ferrite
rings which are in contact with each other and differ in frequency depen-
dence of permeability.

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UDC 669.15.018.8;620.194.2

USSR

ZAKHAROV, YU. V., SENTYUREV, V. P., MARKESHIN, V. S., GRISHIN, A. M., and LEVIN, F. L.

"Stress Corrosion Cracking of Austenitic Steels and Alloys in Boiling 42% Magnesium Chloride"

Sb. tr. TsNII chern. metallurgii (Collection of Works of Central Scientific Research Institute of Ferrous Metallurgy), 1970, vyp. 77, pp 99-101 (from RZh-Metallurgiya, No 3, Mar 71, Abstract No 31597 by authors)

Translation: A study was made of the effect of Ni (10-40%) on the resistance of austenitic steels and alloys (0.02-0.05% C, ~18% Cr, 1-2% Mn, Ti, Nb) to stress corrosion cracking in boiling 42% magnesium chloride. Ultimate long-term corrosion strength values according to Ni content were determined. The results of the work make it possible to give some explanations of the reasons for the contradictory nature of data in the literature on the effect of alloy-ing elements on the stress corrosion resistance of austenitic steels and alloys. Two illustrations. One table. Bibliography with nine titles.

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USSR

UDC 669.15.018.8:620.196.2

ZAKHAROV, YU. V., LEVIN, F. L., SENTYUREV, V. P., GRISHIN, A. M., and MARKESHIN, V. S.

"Intercrystalline Corrosion of Alloys With 20% Cr and 40% Ni as a Function of Alloying"

Sb. tr. TsNII chern. metallurgii (Collection of Works of Central Scientific Research Institute of Ferrous Metallurgy), 1970, vyp. 77, pp 95-98 (from RZh-Metallurgiya, No 3, Mar 71, Abstract No 31592 by authors)

Translation: The article investigates the effect of C, Nb, Mn, Si, Cr, N, Al on the resistance of austenitic Fe-Cr-Ni alloys with 20% Cr and 40% Ni to intercrystalline corrosion in the 500-900° range with holding periods up to 5000 hours. It is shown that alloying with manganese and aluminum sharply lowers the resistance of the alloys to intercrystalline corrosion after provoking heatings. A rise in austenitizing temperature to 1200° contributes to a diminution of resistance. One illustration. Two tables.

1/1

- 3 -

USSR   UDC 669.14.018.8

ZAKHAROV, YU. V., LEVIN, F. L., SENTYUREV, V. P., GRISHIN, A. M., and
MARKESHIN, V. S.

"Intercrystalline Corrosion of Alloys with 20% Cr and 40% Ni as a Function
of Alloying"

Spetsial'nyye Stali i Splavy (Special Steels and Alloys -- Collection of
Works), No 77, Metallurgiya Press, 1970, pp 95-98

Translation: The influence of C, Nb, Mn, Si, Cr, N, and Al on the stabi-
lity of iron-chromium-nickel austenitic alloys with 20% Cr and 40% Ni
against intercrystalline corrosion (ICC) is studied in the 500-900°C tem-
perature interval with holding times up to 5,000 hours.
      It is demonstrated that alloying of the alloys with manganese and
aluminum sharply decreases their resistance to ICC after provoking heating.
A decrease in resistance is facilitated by increasing the austenitiza-
tion temperature to 1200°C. 1 figure; 2 tables.

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USSR   UDC 669.14.018.8:620.194.2

ZAKHAROV, YU. V., SENTYUREV, V. P., MARKESHIN, V. S., GRISHIN,
A. M., and LEVIN, F. L.

"Corrosion Cracking of Austenitic Steels and Alloys in Boiling
42% Magnesium Chloride"

Spetsial'nyye Stali i Splavy (Special Steels and Alloys -- Collec-
tion of Works), No 77, Metallurgiya Press, 1970, pp 99-101

Translation: The influence of nickel on the stability of austeni-
tic steels and alloys to corrosion cracking in boiling 42%
magnesium chloride is studied. The values of the long-term
corrosion resistance limit are determined as functions of the
nickel content. The results of the work make it possible to ex-
plain the reasons for the contradictory data from the literature
on the influence of alloying elements on the resistance of
austenitic steels and alloys to corrosion cracking. 2 figures;
1 table; 9 biblio. refs.

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1/2   038   UNCLASSIFIED   PROCESSING DATE--30OCT70
TITLE--SURFACE SOUND WAVES THEORY IN METALS IN A WEAK MAGNETIC FIELD -U-

AUTHOR-(04)-GRISHIN, A.M., KANER, E.A., LUBIMOV, O.T., MAKAROV, N.M.

COUNTRY OF INFO--USSR

SOURCE--SOLID STATE COMMUN. (USA), VOL. 8, NO. 8, P. 581-5 (15 APRIL 1970)

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SUBJECT AREAS--PHYSICS

TOPIC TAGS--MAGNETIC FIELD, HIGH PURITY METAL, RAYLEIGH WAVE, SURFACE
   WAVE, SOUND WAVE, ELECTRON WAVEGUIDE, SPECTRUM

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CIRC ACCESSION NO--AP0122009
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CIRC ACCESSION NO--AP0122009
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IT IS DEMONSTRATED THAT THE
  SURFACE ELECTRON WAVES SHOULD EXIST IN PURE METALS AND WEAK MAGNETIC
  FIELD NEAR THE FREQUENCIES OF THE ELECTRON TRANSITIONS BETWEEN MAGNETIC
  SURFACE LEVELS. SUCH WAVES ARE ABLE TO INTERACT STRONGLY WITH THE
  RAYLEIGH SOUND VIBRATIONS. SPECTRA DAMPING AND MUTUAL TRANSFORMATIONS
  OF THE ELECTRONIC AND RAYLEIGH WAVES ARE INVESTIGATED.   FACILITY:
  KHAR'KOV STATE UNIV., USSR.

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BALOSHIN, O. N., BLAGORODOV, A. M., BOLONKIN, B. V., VLADIMIRSKIY, V. V.,
GORIN, YU. P., GRIGOR'YEV, V. K., GRISHIN, A. P., YEROFEYEV, I. A., KOROL'KOV,
I. YA., LUZIN, V. N., MILLER, V. V., NIKOLAYEVSKIY, YE. S., PETRUKHIN, V. N.,
PLIGIN, YU. S., PONOMAREV, L. A., SIROTKIN, S. M., SOKOLOVSKIY, V. V., TARASOV,
YE. K., TIKHOMIROV, C. D., TROSTINA, K. A., TURCHANOVICH, L. K., and SHKURENKO,
YU. P., Institute of Theoretical and Experimental Physics GKI AE (State
Committee for the Use of Atomic Energy)

"The $K^-p \rightarrow K^0 n$ Charge Exchange Reaction at a Pulse of 39 Gev/sec"

Abstract: The authors present the measurement results from studying the
charge exchange reaction of K^--mesons on protons ($K^-p \rightarrow K^0 n$) at a pulse of
39 Gev/sec. The study was carried out using the ITEF 6-m magnetic track
spectrometer. The working volume of the magnetic field of the spectrometer was
$1.0 \times 1.5 \times 6$ m . Twelve optical spark chambers were located inside the
magnet, with each chamber having eight spark gaps (10 mm each). The chamber
electrodes consisted of two layers of aluminum foil 14 microns thick. The
photographs were taken through a special slit in the magnet yoke. A mirror
system made it possible to obtain three stereoprojections of all of the chambers

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with one camera. The reaction was studied on the negative particle beam of the IFVE accelerator. The K^--mesons were distinguished by a differential Cerenkov counter. The beam was focused on a liquid hydrogen target 40 cm long which was set approximately three meters from the first chamber of the spectrometer. Approximately $5 \cdot 10^7 K^-$-mesons were passed through the equipment and 1020 photographs taken. Pairs of uniformly charged tracks were measured on the photographs. The measurement results were then processed on the Razdan-3 computer. Only 270 intersecting tracks were found. A graph is given for the differential cross section of the reaction. The results show that the cross section value of 7.4 ± 1.2 microbarns obtained by the authors in comparison to data obtained for lower energies elsewhere shows the logarithmic dependence of the charge exchange cross section on the pulse, equal to -1.58 ± 0.05. The authors thank K. G. Boreskov, A. M. Lapidus, S. T. Sukhorukov, and K. A. Ter-Martirosyan for their presentation of the computational results as the dependence of the differential cross section onpulse transfer (do/dt). This dependence is compared with predictions of the Regge pole model.

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Acc. Nr:
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CHEMICAL ABST. 5-70

Ref. Code:
UR0065

102370z Preparation of mineral oils from a paraffin production filtrate by a hydrorefining method. Azizova, M. Kh.; Chernozhukov, N. I.; Grishin, A. P. (USSR). Khim. Tekhnol. Topl. Masel 1970, 15(2), 23-5 (Russ). A paraffin production filtrate, b. 270-454°, and contg. at -20°, 43.83% solid hydrocarbons, was hydrogenated at a vol. input rate of 0.8 hr^{-1} with 500 m^3 H/m^3 on an Al-Co-Mo catalyst at 290° 50 atm, light fractions were distd. from the hydrogenate, and the conc. obtained in 91% yield was dewaxed. Oils prepd. in 49.14% yield by dewaxing with 400% of a 30:70 Me$_2$CO-PhMe mixt. added in equal portions at 0, -15, -25, and -60° and washed with 200% of the solvent differed from the resp. oils prepd. in 63.60% yield by urea dewaxing mostly with respect to f.p. (-46 and -21°). The corresponding paraffins differed mostly with respect to aromatic hydrocarbon content (3.4 and 2.4%), oil content (14.55 and 1.91%), and urea-complexing hydrocarbon content (64.80 and 83% yields on the solid hydrocarbon present). The dewaxed oils were distd. and corresponding 25° fractions were combined and subjected to adsorption purification on 10% of an aluminosilicate catalyst of 0.25-0.5 mm particle size in order to prep. industrial oils I-12, IT-19, and I-32 and transformer oils satisfying GOST 982-56 with respect to stability and tan angle of dielec. loss (0.14 and 0.15 at 70°).   Lucile S. Davison

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GRISHIN, B.S.,RODINA, M.I., TYURDEYEV, YU. S.

"Traveling-Wave Tube"

USSR Author's Certificate No 245927, filed 6 Oct 67, published 15 May 70 (from RZh--Elektronika i yeye primeneniye, No 2, February 1971, Abstract No 2A203P)

Translation: A traveling-wave tube is proposed with a spiral delay line and additional sections of the spiral with a decreased pitch, located along the length of the TWT against both sides of the spiral delay line behind the energy inputs. With the object of averting radiation from the ends of the delay line and an increase of the stability of operation of the TWT, periodically-located metal connections which mutually lock the neighboring loops of the spiral are installed in the additional sections of the spiral.

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UDC 621.385.632

GRISHIN, B.S.

"Optimum Transverse Dimensions Of Spiral Decelerating System For High Power TWT with Periodic Magnetic Focusing"

Elektron. tekhnika. Nauchno-tekhn. sb. Elektron. SVCh (Electronic Technology. Scientific-Technical Collection. Microwave Electronics), 1970, Issue 9, pp 45-54 (from RZh--Elektronika i yeye primeneniye, No 1, January 1971, Abstract No 1A104)

Translation: A method is considered for choosing the optimum transverse dimensions of the spiral decelerating systems of traveling-wave tubes, from the point of view of assuring the best parameters for a system of periodic permanent magnets (PPM). The optimum transverse dimensions of a TWT with PPM which provide the maximum value of the safety factor with respect to the field K_B can be used advantageously to describe the optimum transverse dimensions of a PPM system ($d_{2\ opt}$, i.e., the optimum internal diameter of the magnetic ring). The optimum transverse dimensions of a decelerating system occur at the known solutions $d_{2\ opt}$ and K_k (where $K_k = D_2/D_{ID}$; D_{ID} is the internal diameter of the

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GRISHIN, B. S., Elektron. tekhnika. Nauchno-tekhn. sb. Elektron. SVCh, 1970, Issue 9, pp 45-54 (from RZh--Elektronika i yeye primeneniye, No 1, January 1971, Abstract No 1A104)

spiral). It is possible to change the optimum transverse dimensions within the limits of 10-70% from the value d_2 $_{opt}$ with a loss of reserve of K_B with reference to $K_{B\ max} \leqslant 5 + 10\%$. The values of d_2 $_{opt}$ do not depend of K_k and the initial point p, and depend on D_2 (external diameter of magnetic ring), K_L (parameter of period), K (correction factor), and V_a (accelerating voltage). The magnitudes K_B and K_{Bmax} are primarily determined by the values K_k and K_L and also by the decreasing order of influence of the values p, K, D_2, and V_a. For the centimeter band the wavelengths d_2 $_{opt}$ correspond to a considerably larger radii of the spiral (γ d$\approx$1.5 + 3) than the ordinarily used values (γ a = 0.9 + 1.2 for a TWT of 10-cm band wave length. 6 ill. 1 tab. 2 ref. G.B.

2/2

TITLE--EXTRACTION OF SOME ACIDS BY TRI,N,OCTYLAMINE -U-

AUTHOR-(04)-NIKOLAYEV, A.V., KOLESNIKOV, A.A., GRISHIN, G.M., GRANKINA,
   Z.A.
COUNTRY OF INFO--USSR

SOURCE--DOKL. AKAD. NAUK SSSR 1970, 191(5), 1074-6 CHEM

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